

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/06087

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K31/728 A61P43/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data, EMBASE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DAVIDSON, J.M. ET AL.: "Hyaluronate derivatives and their application to wound healing: preliminary observations" CLINICAL MATERIALS, vol. 8, no. 1-2, 1991, pages 171-177, XP000984474 abstract introduction discussion	1-6, 12-14
Y	---	1-6, 12-14
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

5 March 2001

Date of mailing of the international search report

26.03.01

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Taylor, G.M.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/06087

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>RUIZ-CARDONA L ET AL: "Application of benzyl hyaluronate membranes as potential wound dressings: evaluation of water vapour and gas permeabilities" BIOMATERIALS, GB, ELSEVIER SCIENCE PUBLISHERS BV., BARKING, vol. 17, no. 16, 1 August 1996 (1996-08-01), pages 1639-1643, XP004032972 ISSN: 0142-9612 abstract tables 1,2 conclusions</p>	1-6, 12-14
X	<p>WO 99 04828 A (RIVAROSSA ALBERTO ; FIDIA ADVANCED BIOPOLYMERS SRL (IT); PRESSATO D) 4 February 1999 (1999-02-04) abstract example 1</p>	1-6, 12-14
X	<p>WO 97 07833 A (CALLEGARO LANFRANCO ; FIDIA ADVANCED BIOPOLYMERS SRL (IT); PAVESIO) 6 March 1997 (1997-03-06) abstract page 2, line 1 - line 17 examples claims 1-28</p>	1-6, 12-14
X	<p>US 5 676 964 A (DELLA VALLE FRANCESCO ET AL) 14 October 1997 (1997-10-14) cited in the application column 16, line 27 - line 3 example 41</p>	1-6, 12-14
X	<p>US 4 851 521 A (DELLA VALLE FRANCESCO ET AL) 25 July 1989 (1989-07-25) cited in the application column 48, line 57 - line 60 example 24 column 43, line 40 - line 44 claims 1,5,14</p>	1-6, 12-14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 00/06087

B x I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 7-11
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

B x II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 7-11

Present claims 1-14 relate to an extremely large number of possible compounds/products, that is to any hyaluronic acid derivative including esters with alcohols, auto-cross-linked esters, cross-linked derivatives, a hemi-ester of succinic acid with hyaluronic acid, o-sulphated and O/N-sulphated derivatives.

Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small number of such compounds/products claimed, namely esters formed from alcohols. In fact, only one example is given which relates to the benzyl ester of hyaluronic acid.

In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compounds/products that are esters of alcohols and hyaluronic acid.

Claims 1 and 3 are unclear because the definition of a "biomaterial" is unclear. Moreover, the distinction between a pharmaceutical composition or a biomaterial is unclear. In the context of said claims, there would appear to be no difference and as such, the expression "or biomaterial" has been disregarded for the purposes of the search.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/06087

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9904828 A	04-02-1999	IT PD970170 A AU 9255598 A EP 0999859 A	28-01-1999 16-02-1999 17-05-2000
WO 9707833 A	06-03-1997	IT PD950166 A IT PD950167 A AU 718484 B AU 6930096 A BR 9610996 A CA 2230530 A CN 1199343 A CZ 9800595 A EP 0850074 A JP 11511344 T NO 980888 A NZ 316944 A PL 325240 A SI 9620106 A TR 9800353 T	28-02-1997 28-02-1997 13-04-2000 19-03-1997 13-07-1999 06-03-1997 18-11-1998 14-10-1998 01-07-1998 05-10-1999 27-04-1998 30-08-1999 06-07-1998 30-06-1999 21-05-1998
US 5676964 A	14-10-1997	IT 1219587 B AT 115590 T AT 195534 T AU 631125 B AU 3574789 A CA 1339122 A DE 68919900 D DE 68919900 T DE 68929241 D DK 10990 A WO 8910941 A EP 0341745 A EP 0614914 A ES 2064378 T ES 2151910 T GR 3015035 T HU 53666 A,B IL 90274 A JP 10324701 A JP 2504163 T JP 2941324 B NZ 229100 A	18-05-1990 15-12-1994 15-09-2000 19-11-1992 29-11-1989 29-07-1997 26-01-1995 11-05-1995 21-09-2000 12-03-1990 16-11-1989 15-11-1989 14-09-1994 01-02-1995 16-01-2001 31-05-1995 28-11-1990 12-09-1996 08-12-1998 29-11-1990 25-08-1999 28-08-1995
US 4851521 A	25-07-1989	IT 1203815 B IT 1214658 B AT 135713 T AU 591501 B AU 5983686 A DE 3650501 D DE 3650501 T DK 323686 A EP 0216453 A EP 0696598 A ES 2001512 A FI 862878 A,B, FI 892710 A,B, FI 892711 A FI 94767 B	23-02-1989 18-01-1990 15-04-1996 07-12-1989 26-02-1987 25-04-1996 21-11-1996 09-01-1987 01-04-1987 14-02-1996 01-06-1988 09-01-1987 02-06-1989 02-06-1989 14-07-1995

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int'l. Application No

PCT/EP 00/06087

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4851521 A		HU 42512 A,B	28-07-1987
		IE 81120 B	22-03-2000
		IL 79362 A	31-07-1995
		IN 165582 A	25-11-1989
		JP 2569012 B	08-01-1997
		JP 62064802 A	23-03-1987
		KR 8701901 B	21-10-1987
		NO 175716 B	15-08-1994
		NO 305369 B	18-05-1999
		NZ 216786 A	26-05-1992
		NZ 233045 A	26-05-1992
		PH 25189 A	27-03-1991
		PT 82941 A,B	01-08-1986
		US 4965353 A	23-10-1990
		US 5202431 A	13-04-1993
		US 5336767 A	09-08-1994
		PH 25383 A	03-06-1991
		PH 25382 A	03-06-1991
		PH 25642 A	21-08-1991
		PH 25643 A	21-08-1991
		ZA 8605071 A	30-09-1987